

AMPHICARPAEA PITCHERI IN NEW ENGLAND.

W. P. RICH.

PLANTS of *Amphicarpaea Pitcheri*, T. & G., have been collected in recent years in two localities in eastern Massachusetts. It was first observed by the writer at Winchester, August 21, 1887, growing in a thicket on the border of Mystic Lake, and again on August 25, 1893, it was found in the damp woods of Oak Island, Revere. A comparison of these specimens with typical ones from the western states shows them to be identical with that species. Abundance of *Amphicarpaea monoica* was growing near at hand in both locations, but *A. Pitcheri* was found on slightly higher and drier ground and in more open spaces of the woods.

The most eastern point in the United States from which this plant has heretofore been recorded is western New York, hence to eastern Massachusetts is a stride that may well attract attention. It is, of course possible that the western species had been accidentally introduced into this section of the country, although the localities where the specimens were found would not favor such an explanation of their occurrence here. I am rather of the opinion that, owing to certain conditions of soil and exposure, our *Amphicarpaea monoica* sometimes attains to the necessary robustness and passes into *A. Pitcheri*.

During the past season I have revisited the localities where the specimens of *A. Pitcheri* were previously collected, and while unable to find any more plants that would pass for this species, there have been found some forms that appear intermediate between it and *monoica*, which intergradation has already been suggested in the Illustrated Flora, Vol. II, p. 334.

While typical *Pitcheri* and typical *monoica* contrast strongly in general appearance, by reason of the stouter habit and denser pubescence of the former, and may therefore well remain as separate species, yet in a series of specimens which I have collected, all the characters which are usually noted in the separation of *Pitcheri* are to be found in our eastern plants. In slender plants of *monoica*, the bracts of the racemes are two millimeters long, making the peduncles of the flowers longer than the bracts. In stouter specimens, these bracts enlarge to four millimeters, equaling in size the bracts of *Pitcheri*, and thus causing the peduncles to be shorter than the bracts, which is one of the characters of *Pitcheri*. The pods of the petaliferous flowers in

typical *monoica* are glabrous, excepting on the margins, yet in more robust plants pods are found which show pubescence all over, as in *Pitcheri*. In the pubescence of stem and leaves, *monoica* is very variable, being sometimes nearly glabrous, sometimes covered with rather copious, coarse spreading hairs, almost as in *Pitcheri*. In the thickness of the leaves, also, there can be noticed a tendency in large plants of *monoica* toward the rougher and thicker leaves of *Pitcheri*. In regard to the subterranean fruiting of the species, I have observed that in smaller plants of *monoica* there is usually an abundance of small one-seeded fruit, seldom over eight millimeters in diameter, while in the forms tending toward *Pitcheri* they are fewer in number but larger, attaining a diameter of twelve millimeters.

These notes are offered as a possible explanation of the occurrence of *Amphicarpaea Pitcheri* in New England.

FAIRY-RINGS FORMED BY LYCOPODIUM INUNDATUM.

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WHILE visiting, on the 20th of July, 1898, the sandy shores of Gilmore Pond near Jaffrey, N. H., I was attracted by some exceptionally fine specimens of the dwarf club-moss, *Lycopodium inundatum*. This species is reputed rather rare in America, but it has already been noted at a considerable number of stations, and where it occurs at all it is apt to be abundant. Therefore, the terms *infrequent*, or *somewhat local*, are probably the strongest which should be employed to express its rarity.

The striking feature of the specimens observed was that they grew in more or less definite rings, not unlike the so-called "fairy-rings," formed by various species of fungi. More than fifty of these rings were observed, together with various regular and irregular patches and segments of curves. The rings varied from 7 dm. to 4 m. in diameter, the circumference being formed by a more or less regular band of prostrate vegetative shoots, which at the numerous forkings threw up abundant fertile stems.

This mode of growth in rings seemed so interesting that I made, during this and several subsequent visits to the pond, such observations and records as limited time permitted. In transferring to paper, on a